Gila Box coordianted resource
management plan

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GILA BOX COORDINATED RESOURCE MANAGEMENT PLAN

Prepared by the

Gila Box Steering Committee

and the

Safford District, Bureau of Land Management

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GILA BOX

COORDINATED RESOURCE MANAGEMENT PLAN

Final

August 1985

Prepared in Cooperation with the

Gila Box Steering Committee

Safford District

Bureau of Land Management

U.S. Department of the Interior

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I. INTRODUCTION

The Gila Box is a well known physical feature in southeastern Arizona. The area, straddling the Graham-Greenlee County line between Safford and Clifton, is highly scenic and mostly in natural condition. The main feature is the canyons of the Gila and San Francisco Rivers and Bonita and Eagle Creeks. The canyon of the Gila is upwards of 1,000 feet deep.

In recent times the area has been the scene of numerous proposals, ranging from a flood-control dam to wilderness designation. In contrast with these proposals are the existing uses of the area: livestock grazing, wildlife habitat, and recreation (off-road vehicles, floatboating, hunting, fishing). Further complicating the situation are the mixture of public, state, and private lands, the large number of cultural resource sites (both historic and prehistoric), and the presence of mining, ranching, and farming facilities.

The Gila Box has also recently been studied for its wilderness suitability. The Bureau of Land Management (BLM) recommended that the area was not suitable for wilderness designation. This led to further questions as to the future management of this area. BLM proposed the preparation of a coordinated resource management plan (CRMP) for the area. In an effort to involve interested members of the public a volunteer advisory group, the Gila Box Steering Committee was formed to assist in the preparation of the CRMP. The overall goal of this effort is to develop a plan for the multiple use management of the Gila Box, while preserving and enhancing the unique qualities of this area..

Members of the Gila Box Steering Committee and the organizations, agencies, or companies they represent are:

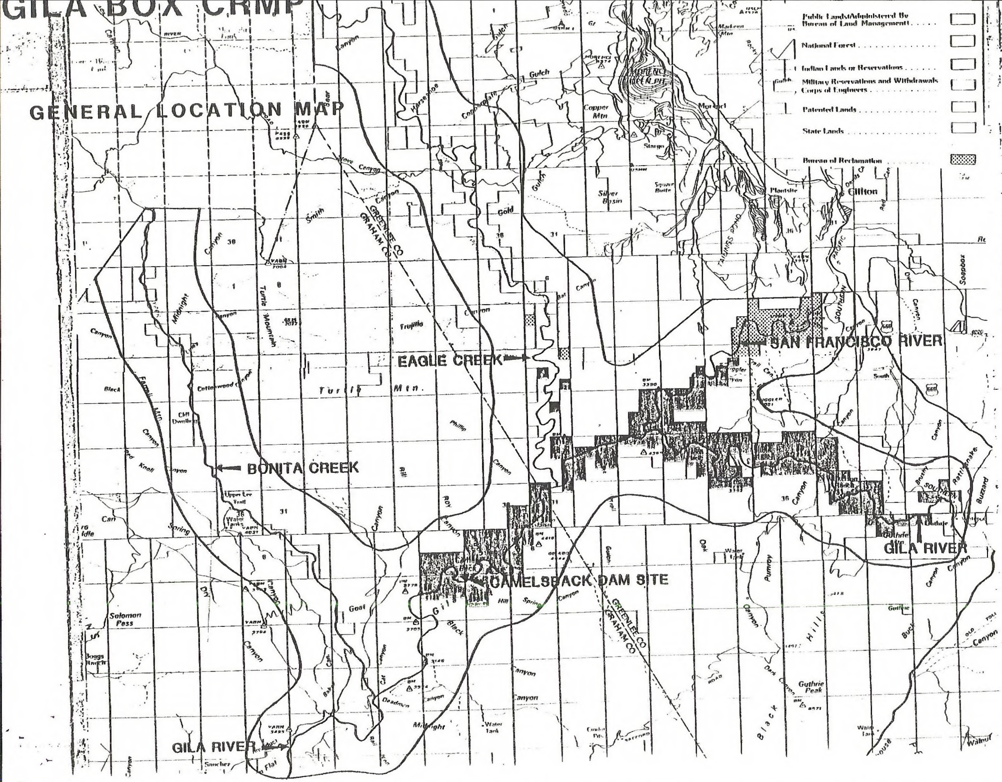
Russ Butcher	National Parks and Conservation Association
Norris Dodd	Arizona Game and Fish Department
Tony Goodman	Local off-road vehicle users
David Johnson	Safford District Advisory Council
Mike Schern	Phelps Dodge Corporation
Ben P. Snure	Safford District Grazing Advisory Board
Robert K. Turner	National Audubon Society
Kenyon Udall	Local Ranchers

The Sierra Club was invited to participate as a ninth member of the Steering Committee. They, however, declined due to a perceived conflict of interest on the future of the Gila Box.

The Steering Committee has met several times to discuss the situation in the Gila Box. Members were also helicoptered into the area to take a first-hand look at specific issues. Working with BLM, the Steering Committee first identified the issues to be addressed in the CRMP and the boundaries of the lands to be dealt with (See Map A). After that they developed objectives to resolve the issues. Those initial steps led to the development of a draft CRMP. The Steering Committee reviewed the draft CRMP and made comments. They also stated their preferences as to recommended actions. All comments have been incorporated into this final CRMP.

GILA BOX CRMP

GENERAL LOCATION MAP



Map A

II. MANAGEMENT CONSTRAINTS

A. Army Corps of Engineers (COE)/Bureau of Reclamation (BOR) Dam Studies and the COE Withdrawal in the Gila Box

The COE and BOR are presently working on a joint study of the Upper Gila River Basin. When completed, this study will recommend several locations to be intensively evaluated for dams for storage and/or flood control purposes. Three sites in the Gila Box are part of this study. The Camelsback site has been a proposed dam location for many years and, to that end, the COE applied for a withdrawal in the Gila Box. The withdrawal application has never been acted upon but the land is managed as if the withdrawal is in effect (i.e. closed to entry under the land and mining laws).

If the COE and BOR recommend a site in the Gila Box for a storage and/or flood control dam, it would eliminate or seriously hamper many of the programs and recommendations made in this CRMP. Those portions of the rivers downstream from the dam, above the pool on the Gila and San Francisco Rivers and Eagle Creek, and on all of Bonita Creek, could still be used for some of the programs or recommendations of this CRMP.

B. Private Lands

BLM has no control over the private lands in the CRMP area. All programs and recommendations in this plan are put forth with the goal of close coordination with private landowners. Many of the programs and recommendations in this plan cannot be completely successful without the cooperation of the private landowners. BLM will continue to work with private landowners to engage their cooperation and enhance the success of the plan.

C. Outside Influences

There are a number of outside influences that affect the CRMP area. They include tailings ponds, dikes, mine dumps, noise from blasting, trains, and equipment, and smoke from the copper smelter. Though these influences are generally outside the CRMP area, visitors can sometimes see, hear, and/or smell them. These influences come from adjacent private lands and, as such, BLM has no control over them.

D. Funding

Funding has become an increasingly important factor in successfully completing any federally funded project. BLM's goal is to complete the recommendations made in this plan. The pace at which various projects are completed, however, depends almost entirely on the funding levels set by Congress and the Administration. One factor that can alleviate some of the funding problems is the use of volunteers. BLM has previously used volunteers on a wide variety of projects and will continue to do so in order to stretch the available funding.

E. Wilderness

Portions of two wilderness study areas (WSAs), Gila Box and Turtle Mountain, are located in the CRMP area. Until Congress makes a decision as to designating them as wilderness or releasing them to other uses, they will be managed under the Interim Management Policy and Guidelines for Lands Under Wilderness Review. This policy prohibits certain activities and restricts others so as to retain the WSAs' wilderness characteristics.

III. GENERAL DESCRIPTION

A. Location

The lands in the CRMP are in east-central Graham County and southwestern Greenlee County, about 17 miles northeast of Safford. The area is located within the Gila and San Simon Resource Areas of the Safford District, Bureau of Land Management.

B. Land Ownership

There are approximately 66,400 acres within the CRMP boundary. The boundary is generally located at a distance of one mile on either side of the four main rivers. The land ownership breakdown is as follows:

34,800	acres of public (BLM) land	52%
9,100	acres of public land in COE withdrawal application (BLM administered)	14%
9,200	acres of state land	14%
13,300	acres of private land	20%
66,400	acres total	100%

The breakdown of land ownership along each of the rivers is as follows:

Gila River

Public	7.0 miles
Public*	18.0 miles
State	0.0 miles
Private	3.0 miles

San Francisco River

Public	0.0 miles
Public*	5.5 miles
State	0.0 miles
Private	2.0 miles

Bonita Creek

Public	5.3 miles
Public*	0.0 miles
State	2.0 miles
Private	6.7 miles

Eagle Creek

Public	0.0 miles
Public*	0.0 miles
State	0.0 miles
Private	20.0 miles

Overall

Public	12.3 miles	17.7%
Public*	23.5 miles	33.8%
State	2.0 miles	2.9%
Private	31.7 miles	45.6%

* in COE withdrawal application

C. Physical Description

1. Topography

The CRMP area is characterized by rugged, mountainous topography with deep, steep-sided, twisting canyons. The Gila River canyon is up to 1,000 feet deep. The river canyons form the dividing line between the Gila Mountains to the northwest and the Black Hills of the Peloncillo Mountains to the southeast. Elevations in the area range from a high of 4,976 feet along upper Bonita Creek to a low of 3,100 feet along the Gila River.

2. Geology

The geology of the area is of two basic types: Gila conglomerate and other stream and lake deposits; and volcanic rocks made up of basaltic flows, agglomerates, tuffs, and cinders. The Gila conglomerate is found along the San Francisco River, the Gila River above its confluence with the San Francisco, and the upper and lower ends of Bonita Creek. The volcanic rocks are found on the rest of the Gila River, the middle portion of Bonita Creek, and all of Eagle Creek.

3. Vegetation

The CRMP area has the grassland, mountain shrub, desert shrub, and riparian vegetation types. Common plants include snakeweed, juniper, evergreen oaks, jojoba, whitethorn, cholla and prickly pear cactus, and various grasses. Riparian vegetation along the rivers includes Freemont cottonwood, Goodding willow, Arizona sycamore, Arizona walnut, velvet ash, netleaf hackberry, mesquite, and saltcedar.

4. Soils

The soils of the CRMP area can be divided into two basic groups; shallow soils of the mountains and alluvial soils of the drainages.

The shallow soils of the mountains comprise most of the area. These soils are similar to the Graham and Lehmans soil series which are shallow (less than 20 inches to bedrock), cobbly or gravelly and have clay textured subsoils. These soils are weathered from basalt or andesite.

The alluvial soils of the drainages are extremely variable, stratified stream deposits composed of sand, gravel, cobble, and rock. The soil depth varies from shallow to deep depending on streambed characteristics. These soils are frequently flooded.

5. Water Resources

The CRMP area contains four perennial streams: Gila River, San Francisco River, Eagle Creek, and Bonita Creek. In addition to perennial streams, the area contains portions of numerous ephemeral or intermittent streams that flow primarily after high intensity thunderstorms. These streams usually flow continuously for only a matter of a few days.

The four perennial streams are all subject to periodic flooding. Spring floods are common, with their intensity depending on the quantity of snow in the upstream watershed and the speed of the snowmelt. Summer flash floods, though short in duration, are also common. It is the exceptional floods, occurring irregularly, that have had a major impact on the river canyons. These floods are caused by extended periods of intense rainfall or by unseasonal rainstorms falling on deep snowpacks.

The length and streamflows of the four perennial streams within the CRMP area are as follows:

Stream	Length	Average Annual Streamflow (In acre feet)	Measurement Location
Gila River	28.0 miles	136,200	South of Clifton
San Francisco River	7.5 miles	142,700	At Clifton
Eagle Creek	20.0 miles	19,000*	At Pumping Station
Bonita Creek	14.0 miles	**	North of Safford's Water Plant
TOTAL	69.5 miles		

* The data source shows 37,020 acre feet. This, however, includes some 15,000 acre feet of imported water that Phelps Dodge places into Eagle Creek from other sources. About 18,000 acre feet per year are pumped out of Eagle Creek at the pump station, leaving a net flow to the Gila River of about 19,000 acre feet.

** Streamgage installed in 1981, insufficient data available.

Source: Water Resources Data, Arizona, Water Year 1982, U.S.G.S.

The Gila River measured at Solomon, just downstream of the CRMP area, has an average annual streamflow of 327,500 acre feet.

6. Climate

Climatic conditions in the CRMP area are similar to those throughout the region. Summer days are hot but usually not unbearable. Average winter temperatures in the higher elevations fall below freezing, and snow falls occasionally. January temperatures average 40-45 degrees (Fahrenheit) and July temperatures average 80-85 degrees. Annual precipitation averages 10-15 inches with most rainfall in the late summer. Drought is most common from April to June and less severe in the fall.

D. Resource Data

1. Livestock Grazing

Livestock grazing is an important use in the CRMP area. Portions of 12 allotments, ranging from 2% to 84%, are found in the area (See Map B). Most of the upside slopes in the canyons are not grazed due to the steep terrain. The uplands above the canyon rims offer many opportunities for grazing, though the quality of the forage is highly variable. Based upon the percentage of each allotment in the CRMP area, there are about 8,200 Animal Unit Months (AUMs) involved, though the actual use is probably up to 25% lower because the rough canyon country is not grazed or is only lightly grazed.

The majority of range improvements in the affected allotments are found outside the CRMP boundary. Where improvements are found in the CRMP area, they are mostly in the uplands and not in the canyons. The bulk of the improvements are fences, but also included are stock tanks, corrals, troughs, pipelines, and line shacks.

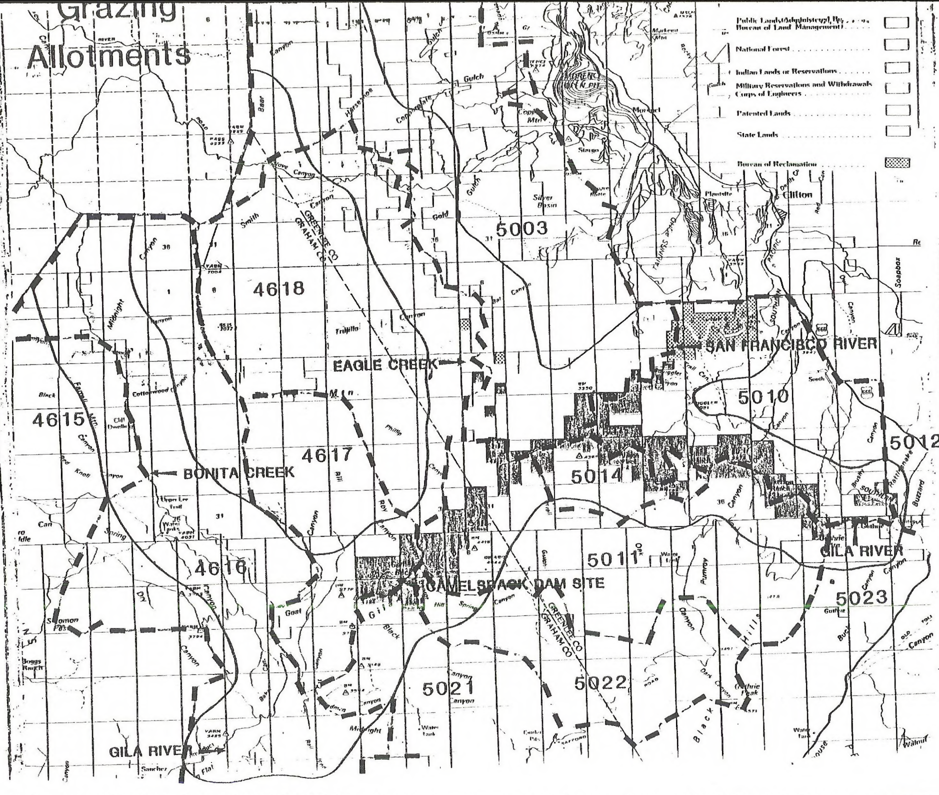
Of major interest with cattle is their grazing in the canyon bottoms. Cattle grazing in this area is concentrated because of the terrain and is a major limiting factor in the reproduction of broadleaf riparian species. Another problem arises when trying to gather cattle out of the canyons. Over the last few years, some allotments have had fences installed to preclude cattle from moving down into the canyon bottoms. This action has also included the construction of stock waters to replace the rivers as a source of water. The goal of this action is to control livestock grazing in the canyon bottoms. This effort is funded by the wildlife program and will be further discussed later.

Grazing allotments within the CRMP boundary.

Number	Name	Allottee	% of Allotment in CRMP area
4615	Johnny Creek	Kennedy Curtis	9
4616	Bonita Creek	M.P. Earven	58
4617	Bullgap Community	H.O. Stevens and M.P. Earven	44
4618	Turtle Mountain	Kenyon Udall (sublease from Ruskin Lines	31
5003	Slash Hook	Kenyon Udall	57
5010	Smuggler Peak	Kenyon Udall	62
5011	Gila	Jeff Menges	25
5012	Clifton	Elno Lunt	2
5014	Gila	Jose Subia	84
5021	Twin C	Jose Cueto	22
5022	County Line	Gary Allred	9
5023	Buck Canyon	Joe Cannon	14

Many of the allotments listed include state and/or private lands along with the public land. In some cases the private land is owned by the allottee while in others it is leased by the allottee from other owners.

Grazing Allotments



Map B

2. Recreation

The main recreation activities in the CRMP area are off-road vehicle (ORV) use and fishing. ORV use occurs during periods of low water (usually June to January) and may total as much as 7,500 recreation visitor days (RVDs) in a good year. Residents of the Safford Valley usually enter the Gila Box at or below the mouth of Bonita Creek, travel upstream to Eagle Creek, and return the same day. Clifton and Morenci residents usually enter the Gila Box on the San Francisco River in or just below Clifton, travel downstream to Eagle Creek, and return the same day. These residents will also travel down Eagle Creek to its mouth and return by the same route or travel back via the San Francisco River. While all types of vehicles are used, sand rails are the most effective in traversing the canyons. Other vehicles are often used but can easily get stuck, except in Bonita Creek where a graded wash-bottom road exists. Most evidence of ORV use is washed away during the spring runoff or summer flash floods.

In recognizing ORV use of the public lands, BLM establishes controls on the use and operation of ORVs. Public lands can be designated open, closed, or limited to ORV use. The objective is to provide for ORV use, protect the public lands, promote user safety, and reduce user group conflicts. ORV designations have not yet been determined for the public lands in the CRMP area.

Fishing occurs along the Gila and San Francisco Rivers and may total up to 2,000 RVDs annually. Access for much of the fishing is by ORVs traveling in the canyon bottoms. When water levels permit (usually from February to May), 200-800 RVDs of floatboating occurs. Most floating begins on the San Francisco River south of Clifton and ends at Bonita Creek. Hunting in the area may total 200-300 RVDs per year and deer, javelina, dove, quail, and waterfowl are all hunted. Small amounts of picnicking occur throughout the area and may total 200 RVDs. A small amount of other recreational activities also occur in the area and include birdwatching, sightseeing, camping, tubing, swimming, hiking, and backpacking.

Recreational use of the CRMP area occurs primarily because of the presence of perennial streams, riparian vegetation, and the highly scenic canyons. It is important to retain these features in order to continue to provide the opportunity for a quality recreational experience. Enhancing riparian vegetation along the rivers will not only improve wildlife habitat but also allow for expansion in the types of recreation, the number of visitors, and improve the quality of the recreational experience.

In 1982 the National Park Service completed an inventory of the nation's rivers. The Gila River, in its entirety in the CRMP area, and Eagle Creek, the entire length in the CRMP area as well as farther north in the Apache National Forest, were identified as deserving of further study for wild and scenic river status. No further studies have been started on those portions of these two rivers in the CRMP area. The lands that would be involved are those within one-quarter mile on either side of the rivers. Wild, scenic, and recreational river designations provide management and protection of rivers in

a free-flowing condition. The rivers and their immediate environments must possess outstanding scenic, recreational, geologic, cultural, or other similar values to be considered for inclusion in the National Wild and Scenic Rivers System.

The portion of the San Francisco River within the CRMP area was evaluated for wild and scenic river status in 1981. Part of a larger study area, this portion of the San Francisco River was found unsuitable as a wild and scenic river.

Several proposals have been made to designate portions of the CRMP area as outstanding natural areas (ONA) or areas of critical environmental concern (ACEC). The rationales for these proposals included the protection of highly scenic canyons, perennial streams, riparian vegetation, geologic features, wildlife habitat, and threatened and endangered species. ONA status manages for the greatest amount of recreation use possible without damage to the natural features that make an area outstanding. Outstanding features are defined broadly as unusual natural characteristics. ACEC status manages public land to prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes.

3. Visual Resources

Visual resource management (VRM) is a process to identify and manage the quality of the visual environment and to reduce the visual impacts of development activities. VRM classes were identified for the public lands in the CRMP area through previous land-use planning efforts (See Map C). Most of the lands in the CRMP area are in VRM Class I, with small portions in Classes III and IV. The Class I designations were made in recognition of the outstanding scenery, primitive qualities, and natural condition of the river canyons. The VRM classifications form the basis for analyzing the expected visual impacts of a proposed land use action. After analysis, mitigating measures may be applied to reduce the visual impacts to a level consistent with the objectives of the VRM class. VRM constraints apply only to public lands.

The five VRM classes, their objectives, and required management are as follows:

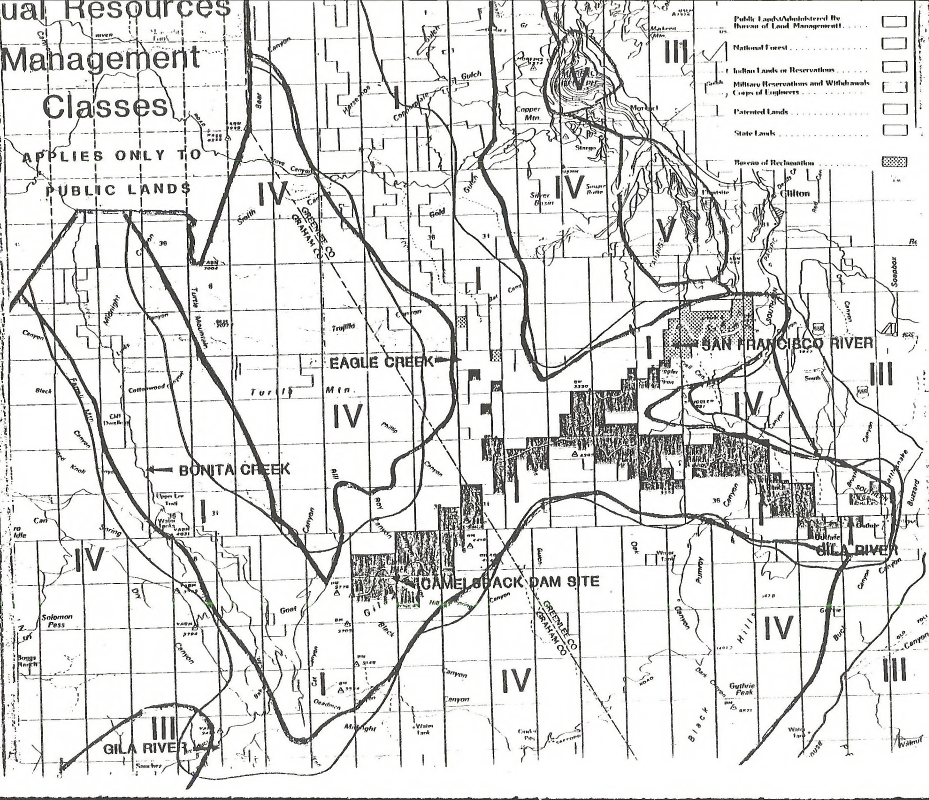
Class I - Class I provides primarily for natural ecological changes only. It is applied to wilderness areas, some natural areas and similar areas where management activities are limited. Any contrast in the characteristic landscape must not attract attention.

Class II - Changes in any of the basic landscape elements (form, line, color, texture) caused by a management activity should not be evident in the characteristic landscape. Contrasts are seen, but must not attract attention.

Class III - Changes caused by a management activity may be evident in the characteristic landscape, but the changes should remain subordinate to the visual strength of the existing landscape.

Class IV - Changes caused by a management activity attracts attention and may be a dominant feature of the landscape in terms of scale, but the changes should repeat the form, line, color, and texture of the characteristic landscape.

Class V - Change is needed. This class applies to areas where the natural character has been disturbed to a point where rehabilitation is needed to bring it back into character with the surrounding countryside.



Visual Resources Management Classes

APPLIES ONLY TO PUBLIC LANDS

Map C

4. Land Uses

A large variety of land uses occur in the CRMP area (See Map D), ranging from power lines and roads to ranches and water facilities. While many of these uses occur on private and state land, most of them involve public land either directly or indirectly.

a. Power Lines

Portions of five power lines cross the CRMP area. The total length within the area is about 15 miles. Four of the power lines are found in the eastern portion of the area and the fifth line crosses upper Eagle Creek.

b. Roads

A large number of roads are found in the CRMP area. These roads range from all-weather graded roads receiving regular maintenance to primitive ranch roads that receive only occasional maintenance. Most of the roads are found on the periphery of the area and in the vicinity of Bonita Creek.

c. Railroads

Portions of the Southern Pacific Railroad tracks cross the eastern portion of the CRMP area. The total length within the area is about five miles. This track serves the Phelps Dodge mine at Morenci.

d. Pumping Plant

The pumping plant on Eagle Creek serves the Phelps Dodge mine at Morenci. Associated with the pumping plant are several houses, pipelines totaling about five miles in length, and a diversion dam.

e. Water Plant

The water plant in lower Bonita Creek is owned by the City of Safford and is the main source of water for that city. Associated with the water plant are several buildings and two pipelines about ten miles long within the CRMP boundary.

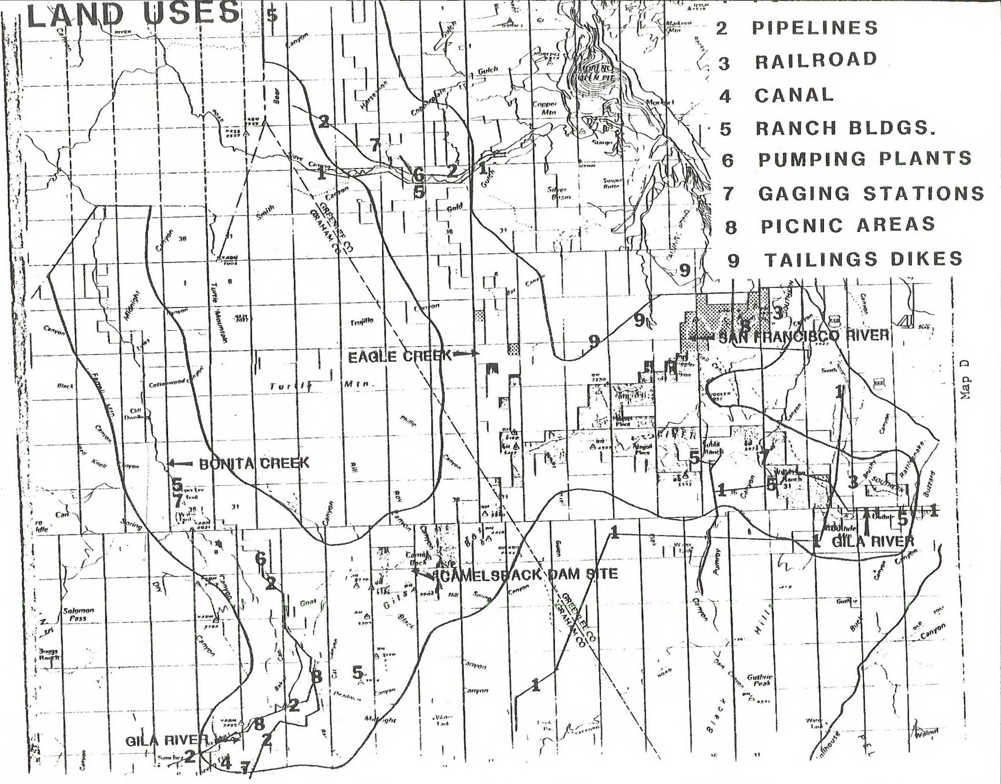
f. Ranch Houses and Facilities

Several ranch houses and numerous ranch facilities are found in the CRMP area. Most of the houses are found on private land while most of the ranch facilities are on public or state land.

g. Brown Canal

The Brown Canal begins in the southwestern portion of the CRMP area on the Gila River. This canal is less than one mile long in the area. Associated with it are an access road, gates, and a diversion dam across the Gila River.

LAND USES


2 PIPELINES
3 RAILROAD
4 CANAL
5 RANCH BLDGS.
6 PUMPING PLANTS
7 GAGING STATIONS
8 PICNIC AREAS
9 TAILINGS DIKES
SAN FRANCISCO RIVER
EAGLE CREEK
BONITA CREEK
CAMELSBACK DAM SITE
GILA RIVER
GILA RIVER
GREENLEE CO
GRAHAM CO
GREENLEE CO
GRAHAM CO
Morenci Open Pit
Turtle Mtn.
Solomon Pass
Guthrie Peak
Black Hills
Map D

h. Gaging Stations

Four gaging stations are found in the CRMP area: Gila River south of Clifton, located near the Gila River bridge on the old Safford-Clifton Road; Eagle Creek above the pumping plant, near Morenci; Gila River at head of Safford Valley, near Solomon; and Bonita Creek north of the City of Safford's water plant.

i. Tailings Ponds

Portions of the new Silver Basin and Southwest tailings ponds and dikes, safety dams, and access roads are found on private lands in the northeastern part of the CRMP area. The dikes will continue to grow over time to a height of 800 feet from the current height of 400 feet.

j. Corps of Engineers Withdrawal

A withdrawal application is on file for the Corps of Engineers for the Camelsback dam and reservoir. This location is being studied for a possible flood-control dam. There are no facilities on the ground at this time. The withdrawal, completely within the CRMP area, covers about 9,100 acres.

5. Minerals and Energy

a. Minerals

The Dorothy B gold placers in the southwestern portion of the CRMP area have been intermittently worked and produced some minor amounts of gold from gravels along the Gila River near the mouth of Bonita Creek. There are similar gold placer deposits along the San Francisco River and its tributary gulches.

The Morenci Mining District, northeast of the CRMP area, is one of the largest copper producers in the United States and has the second largest open pit copper mine in North America. The Morenci District has also been a producer of gold, silver and molybdenum.

Several large copper deposits have been discovered in the Lone Star Mining District, which lies in the Gila Mountains a few miles west of the CRMP area. Hundreds of millions of tons of ore are identified at the Kennecott, Phelps Dodge, San Juan, and Inspiration properties.

In the southwestern portion of the CRMP area there is copper mineralization, and a 1,500-foot-deep drillhole reportedly found copper values of 0.2 percent.

The post mineralization volcanic rocks underlying the CRMP area have yielded no mineral production in the past. The area, however, cannot be readily dismissed as having no mineral potential because it lies between Arizona's largest open pit mine and a relatively recent discovery of a district estimated to have over a billion tons of copper ore. Rocks of similar age underlie the CRMP area, and are generally unexplored due to the depth of the burial and remote nature of the area.

b. Energy

All lands within the CRMP area are classified as prospectively valuable for geothermal resources. The Gillard Hot Springs, on the north bank of the Gila River, discharge the hottest water in the Southwest outside the Jemez Mountains in New Mexico. Measured surface temperatures range from 80°-84°C (176°-183°F), and studies suggest temperatures of 135°-150°C (275°-302°F) below 2000 meters (6562 feet). Seven miles to the northwest, Eagle Creek Hot Springs discharge into a tributary of Eagle Creek. Shallow wells have tapped water up to 56°C (133°F). Geothermal potential along the fault between Gillard Hot Springs and Eagle Creek Hot Springs is the same as at the hot springs. Studies conducted in 1981 suggest temperatures up to 150°C (302°F) at 6,500 feet in the Clifton-Morenci area.

The Safford District completed the Gila Box Geothermal Resources Leasing Proposal Environmental Assessment in 1980. This assessment evaluated the impacts of geothermal development in the Gila Box and included most of the lands in the CRMP area. The most significant constraint that came out of the assessment was the no surface occupancy stipulation for all lands within onehalf mile on either side of the Gila and San Francisco Rivers and Bonita and Eagle Creeks. The rationale for this stipulation along perennial streams was to protect riparian habitat and threatened and endangered species.

A recent publication (Petroleum Potential of Wilderness Lands in the Western United States, US Geological Survey, 1983) has rated the petroleum potential of wilderness lands in Arizona. The lands in the CRMP area generally correspond with those for Turtle Mountain and Gila Box Wilderness Study Areas. These two WSAs are rated at low to zero potential.

6. Fire Management

The lands in the CRMP area come under the Safford District Modified Fire Suppression Plan. This plan requires taking appropriate suppression actions depending on the type of fire and the threat to other resources, such as wildlife, range, or cultural resources but also including life and property. If there is a threat to any identified resource, then full suppression may occur.

The CRMP area has a history of about two fires per year. A good percentage of these fires are man caused. Fires in the area generally remain small due to a limited amount of fuel.

7. Cultural Resources

The known cultural resources within the CRMP area are diverse, representing the full spectrum of man's presence in Southeastern Arizona, from early preagriculturalist Archaic cultures (pre 300 BC) to the present.

To date, 32 prehistoric sites are known to occur within the area. These include six lithic sites of undetermined cultural origin and 22 occupation sites ranging from campsites and rockshelters to villages. The occupation sites represent all three prehistoric agricultural communities known to occur

in southeastern Arizona: the Mogollon (300 BC-1200 AD); the Hohokam (300 BC-1450 AD); and the Salado (1100 AD-1450 AD). In addition, four rock art sites are known in the area. One of these, east of Sanchez in the extreme southwestern part of the CRMP area, has been interpreted as a map to guide prehistoric travelers around the Gila Box.

The Apaches (1500-1886 AD) also used the Gila Box until about the time Geronimo surrendered (1886). Historically, the Apache are known to have used this area as a hideout en route to and from raiding trips.

The historic period is represented by 25 known sites including the Kearney Campsite. Colonel Kearney, Kit Carson, and 100 Dragoons (the Army of the West) camped here after hauling two cannons through the Gila Box. This site and the associated trail are local landmarks and on the National Register of Historic Places.

Other known historic sites include two water wheels and 17 dwellings (ranches, homesteads, goat herders' field houses, and miner's cabins). The first railroad in the area crossed the Gila River upstream from the Gila Box to serve the mines to Morenci.

Knowledge of site distribution within the CRMP area is based on a few project surveys and it is clear that the potential for sites in the area that has not been surveyed is extremely high.

The lines on the map represent project surveys for range or wildlife improvements. The line in the extreme eastern part of the CRMP area represents the AEPCO Survey up Nigger Canyon. This is where a full 98% of the known lithic sites of possible Archaic origin occur. The shaded areas just east of the confluence of the San Francisco and Gila Rivers represent the only systematic survey conducted within the area using archaeological site potential criteria as a basis for survey locale. This survey was conducted in 1975 for the Geothermal Lease Project (Kinkade 1975).

8. Wildlife

a. Terrestrial Habitat

The Gila Box CRMP area is located in a transition zone between two major climatic zones; the Sonoran and Chihuahuan Deserts. Transition zones have a greater diversity of plant and animal species than is found in any one individual vegetation type. Plants shared by these two deserts include creosotebush (Larrea tridentata), ocotillo (Fouquieria splendens), mesquite (Prosopis juliflora), whitethorn (Acacia constricta), prickly pear (Opuntia spp.), and wolfberry (Lycium spp.). Plants specific to the Sonoran Desert and occurring in the area include blue paloverde (Cercidium floridum), brittlebush (Encelia farinosa), false paloverde (Canotia holacantha), and jojoba (Simmondsia chinensis). Plants specific to the Chihuahuan Desert and occurring in the area include allthorn (Koberlinia spinosa) and desert sumac (Rhus microphylla).

The terrestrial habitat can be divided and described in four topographic categories: uplands, terraces, desert washes and side canyons, and river terraces. Each of these as at least one particular plant community inhabited by a different group of wildlife species. The combination of transitional desert vegetation types with either mesquite bosques or broadleaf riparian on the river terraces gives the area tremendous potential for an abundant and diverse wildlife community. In general, the CRMP area is below while the riparian areas are far below their potential in providing wildlife habitat due to problems specific to each of the terrestrial habitat categories.

(1) Uplands

The major plant community on the upland areas (1250-1750 m. or 4100-5740 ft.) can be described as Semi-desert Grassland (Brown and Lowe 1978). Stands of pure grassland typical of this vegetation type, however, are rare in the area and grasslands with significant amounts of shrubs are more common. Where shrubs have established prominence in a grassland, overgrazing by domestic livestock is generally considered to have been part of the cause. Historic heavy grazing enabled non-palatable shrub species such as snakeweed (*Gutierrezia spp.*) and burroweed (*Haplopappus tenuisectus*) and grazing resistant species such as mesquite to become established in what is potentially grassland habitat. Other contributing factors to shrub establishment exacerbate the deterioration of grasslands. As the grass cover was diminished, the potential for natural wildfire was also reduced. Many of the nonpalatable shrubs in this potential grassland are highly susceptible to destruction by fire, but are often protected from fire by the absence of healthy pure stands of perennial grasses. All of the causes for the deterioration of the grassland are subject to argument, but it is accepted that much of the grassland habitat isbelow its potential. Attempts are currently being undertaken to remedy this situation. Livestock numbers are being reduced and wildfire promoted through modified suppression fire management, with an anticipated upward trend in habitat condition.

At higher elevations vegetation communities contain small amounts of Interior Chaparral Associations, including scrub liveoak (*Quercus turbinella*), buckthorn (*Rhamnus crocea* and *R. californica*), squawbush (*Rhus trilobata*), silktassel (*Garrya wrightii*), and mountain mahogany (*Cercocarpus brevifloris* and *C. betuloides*). These important deer browse species frequently are heavily used by domestic livestock, having a negative impact on the health of the plants and on the numbers of deer as well.

Small areas of Madrean Evergreen Woodlands also occur at higher elevations. This association includes oaks (*Quercus emoryi* and *Q. arizonica*) and juniper (*Juniperus monosperma* and *J. deppeana*).

At lower elevations vegetation communities are primarily Desert Scrub Associations dominated by creosotebush. The other major component of this vegetation type are several species of prickly pear and cholla cactus (*Opuntia spp.*). Mesquite and wolfberry are also found in this type.

(2) Terraces

This term describes flat surfaces of valley fills occurring mostly along the Gila River. They are characterized by poor drainage due to caliche, conglomerates and sealed clays. They are generally sparsely vegetated. Mesquite on terraces are usually short and multi-stemmed giving a scraggly appearance. When terraces intersect rocky outcrops from upland areas, Desert Scrub species are predominant.

(3) Desert Washes and Side Canyons

Vegetation in these areas is quite varied depending on the flow regime of the drainage and the configuration of the canyons. They can vary from an enhanced version of Desert Scrub vegetation to true broadleaf riparian in the narrower or wetter canyons.

(4) River Terraces

Depending on the height above rivers and the frequency of flooding, two different vegetation communities may be found; mesquite bosques and broadleaf riparian.

(a) Mesquite Bosques

Mesquite bosques are generally found on elevated terraces of fine alluvial soils. These are areas of virtually solid mesquite trees (95-99%) with typically sparse understory vegetation. After prolonged or extensive rainfall the understory vegetation can include dense stands of annual forbes and grasses. In the Gila Box this situation has been altered by heavy cattle use. Mesquite bosques tend to attract cattle because they offer shade and edible understory vegetation. Bosques occur on all the rivers in the area with the most impressive acreage occurring on the Gila River. Mesquite con- centrations also occur on the side drainages near the main water courses. The main concern regarding the bosques is they occur on soft, sandy soils that are quickly eroded during severe floods. The loss of mesquite bosques has been accelerated due to an altered river flow regime and removal of vegetation along the rivers. This subject will be discussed in a later section. An additional problem in the mesquite bosques is firewood cutting. The extent of this problem has not been determined with any detail but it was identified as a problem in the ASU study (Minckley et al 1978-1978).

(b) Broadleaf Riparian

Trees in this category include Fremont cottonwood (Populus fremontii), willows (Salix gooddingii and S. bonplandiana), Arizona sycamore (Platanus wrightii), velvet ash (Fraxinus velutina), Arizona walnut (Juglans major), as well as some higher elevation species such as boxelder (Acer negundo) and alder Alnus oblongifolia).

All of the major rivers in the area, the Gila and San Francisco Rivers and Bonita and Eagle Creeks, have the potential to produce predominant stands of

broadleaf riparian vegetation. Rivers with healthy broadleaf riparian communities appear lush with vegetation, contain trees over 100 feet tall, develop stable banks due to the soil holding properties of enormous fibrous root systems, and have trees with normal age distributions giving the ability to recover after severe flooding. The Gila and San Francisco Rivers are presently characterized by sparse broadleaf riparian communities, decadent trees, extremely limited seedling survival, and a decreasing ability to respond to the stresses of flooding. Bonita Creek is in slightly better condition and Eagle Creek has the healthiest broadleaf riparian community in the area. Detailed inventories of the broadleaf riparian communities were done by ASU in 1976-78 on all four rivers and by BLM in 1980 on all but Eagle Creek. BLM, in cooperation with private landowners, will be conducting a riparian survey on Eagle Creek in the spring of 1985 or 1986. The conclusions made by both inventories were the same: the vegetation communities along all the rivers were far below their potential and the major factor responsible for the extremely poor condition of the broadleaf riparian communities was heavy cattle concentrations along the rivers. Though various species of wildlife also consume riparian seedlings, it is the concentration of cattle in the narrow canyon bottoms along with the limited amount of other available forage that results in the consumption of virtually all the broadleaf riparian seedlings. The extremely poor seedling survival eventually results in the elimination of all broadleaf riparian trees and the loss of all broadleaf riparian communities. The Gila and San Francisco Rivers only have sparse areas of decadent riparian trees and have no dominant broadleaf riparian communities. A community consists of more than a stand of decadent trees. It must include many different species, each in all life stages. Although Bonita Creek has more trees, it has no dominant broadleaf riparian communities. The dominant communities on these three rivers are riparian scrub communities composed of mesquite, burrobush (Hymenoclea spp.), seepwillow (Baccharis glutinosa), and other scrubby woody plants. These plants are a common part of the river vegetative community, but should not be dominant over the broadleaf riparian community. The reason for their dominance is mesquite's resistance to grazing and the unpalatability of other species. They are dominant by default.

A great deal of progress has already been made to correct this situation. Bonita Creek has one cattle exclosure protecting 1.5 miles of potential broadleaf riparian habitat. The Gila River exclosure fence should be completed by 1986 and will protect twenty miles of potential broadleaf riparian habitat. Additionally, three broadleaf riparian planting sites on the Gila River are established, with more planned. The San Francisco River will have one cottonwood planting site in the spring of 1985. These and future projects will be discussed in detail in another section.

Regular flooding in the Gila Box has had some impacts on riparian communities. It has been the exceptionally large floods that have had major impacts due to the total removal of tremendous acreages of both broadleaf riparian and mesquite bosque communities. The important point in the analysis of broadleaf riparian communities is they have evolved in a potential flood environment over thousands of years. The recuperative ability of broadleaf riparian trees is tremendous. Their seeding strategies rely on flood regimes. Buried cottonwoods and willows resprout in the spring and produce large numbers of

shoots, eventually producing solid stands of mature trees. Dislodged cottonwoods and willows can resprout and reroot in their new positions downstream. Walnuts rely on floods to float their seeds to the upperbank areas where they are typically seen as mature trees. New stands of broadleaf riparian trees actually affect the course of the river and the deposition of soil to enhance their survival. All of the natural calamities inflicted on broadleaf riparian communities can be compensated for by their adaptability, resulting in dramatic recoveries over as short a time as one growing season. The one calamity no species can overcome is the total consumption of seedlings. Without replacements, no community can survive.

The importance of broadleaf riparian communities to wildlife has been established by many studies. The number and abundance of species found in broadleaf riparian communities is the highest of any desert vegetative community. Some animals are "obligate" riparian species, meaning they rely on riparian areas and would be absent otherwise. Other species are "facultative", meaning they do not depend solely on the riparian habitat but their numbers are greatly enhanced by a healthy riparian community. The importance of broadleaf riparian communities to wildlife readily dictates major efforts to protect and enhance this valuable community.

b. Aquatic Habitat

The ASU study contains great detail on the aquatic habitat of the four rivers in the area. The information includes physical features, chemistry, bacteriology and algology. A summary of the four rivers is as follows:

(1) Gila River

The Gila River has generally acceptable physical and chemical features to support aquatic life and warm water fisheries. Turbidity, however, exceeded Arizona's minimum standards for aquatic life in approximately two-thirds of the samples, even during periods of low discharge. Fecal coliform numbers equalled but did not exceed recommended standards. The ratios of fecal coliform to fecal streptococci suggested livestock and wild animals as the primary sources of contamination.

(2) San Francisco River

This river was generally similar to the Gila River in stream chemistry but it did not have high turbidity. Fecal coliform numbers, however, exceeded recommended standards on several occasions. Ratios of fecal coliform to fecal streptococci suggested livestock as the primary source of contamination.

(3) Eagle Creek

Eagle Creek's annual discharge represents approximately 6% of the Gila River flow near Safford. Eagle Creek provides low turbidity, low salinity water that offers a small reduction in the salinity of the Gila River. Eagle Creek was designated a cold water fishery in 1977 by the Arizona Game and Fish Department. The actual temperatures in the lower end of the river were found

to exceed temperature limits for a cold water fishery. Fecal coliform numbers exceeded recommended standards during the summer. Ratios of fecal coliform to fecal streptococci suggested livestock and wild animals as the source of contamination.

(4) Bonita Creek

Bonita Creek is chemically similar to Eagle Creek, although it is intermittent in the lower reaches. The lower part of Bonita Creek, however, had dissolved oxygen concentrations below that recommended for fish and aquatic life in the summer. Additionally, fecal coliform numbers exceeded recommended standards, with the highest numbers occurring in the summer. Ratios of fecal coliform to fecal streptococci suggested mixed human and livestock sources of contamination.

(5) General

Aquatic habitat can be greatly enhanced through improvement of the broadleaf riparian communities. These communities provide shade and also affect the river's course to provide pools and riffles that are important components of aquatic habitat.

c. Threatened and Endangered (T&E) Species

A number of state or federally listed and candidate species of animals are found in the CRMP area. No state or federally listed or candidate species of plants are known to occur in the area.

Species	Listed by 1/	Category 2/	Occurrence 3/
Bald eagle	F,S	E,II	V
Peregrine falcon	F,S	E,III	V
Loach minnow	F,S	C,III	V
Razorback sucker	F,S	C,III	V
Osprey	S	III	V
Northern beardless tyrannulet	S	III	V
Black hawk	S	III	V
Snowy egret	S	IV	V
Great egret	S	IV	P
Black-crowned night heron	S	IV	V
Black-bellied whistling duck	S	IV	P

1/ F = U.S. Fish and Wildlife Service, S = Arizona Game and Fish Dept.

2/ C = Candidate species, E = Endangered, II = Animals whose continued presence in Arizona is now in jeopardy and extirpation from the state is highly probably if no recovery efforts are made, III = Animals whose presence in Arizona could be in jeopardy in the foreseeable future, IV = Animals for which there is a moderate threat to the habitats they occupy.

3/ P = Probable, V = Verified

Bighorn sheep are not a listed species, but they are a priority management species for the Arizona Game and Fish Department (AGFD). There is a small population of sheep using the area and an introduction of additional sheep has been proposed. This will be further discussed in a later section.

d. Gila-Peloncillo Habitat Management Plan (HMP) Summary

The Gila-Peloncillo HMP is a document jointly prepared by BLM and AGFD. The HMP was approved by both agencies and became effective on April 2, 1982. This document also contains a great detail on the habitat and wildlife of the area. The following is a summary of the recommendations made in the HMP that apply to the CRMP area.

Livestock, and in some cases motor vehicles, will be excluded by fencing or other means from selected portions of riparian areas detailed in Appendix III (of the HMP), according to the implementation schedule. This will benefit all species of wildlife; particularly waterfowl, raptors, nongame birds, nongame mammals, amphibians, reptiles, fish and threatened and endangered species. Recreationist access will be provided at main access points.

A coordinated evaluation of historic and potential desert bighorn sheep habitat will be conducted by AGFD and BLM.

A cooperative study will be conducted to determine the feasibility of reestablishing the peregrine falcon as a breeding bird in suitable locales in the habitat area. Perform such transplants if deemed desirable.

The feasibility of reintroducing the river otter into suitable historic habitat within the Gila River complex will be studied. This effort will be coordinated with AGFD.

The feasibility of reintroducing the woundfin, Gila topminnow, and/or other threatened or endangered fish species into suitable habitat within the Gila River complex will be studied. Native fishes will be given priority if reintroductions are deemed feasible.

That portion of the Eagle Creek Bat Cave not in public ownership will be investigated for acquisition by means of land exchange.

During the nesting season, nests of state and federal threatened and endangered bird species will be protected from excessive human disturbances. Bureau and Bureau-authorized activities will be curtailed and travel restricted as determined on a case-by-case basis and extended protection will be provided where appropriate.

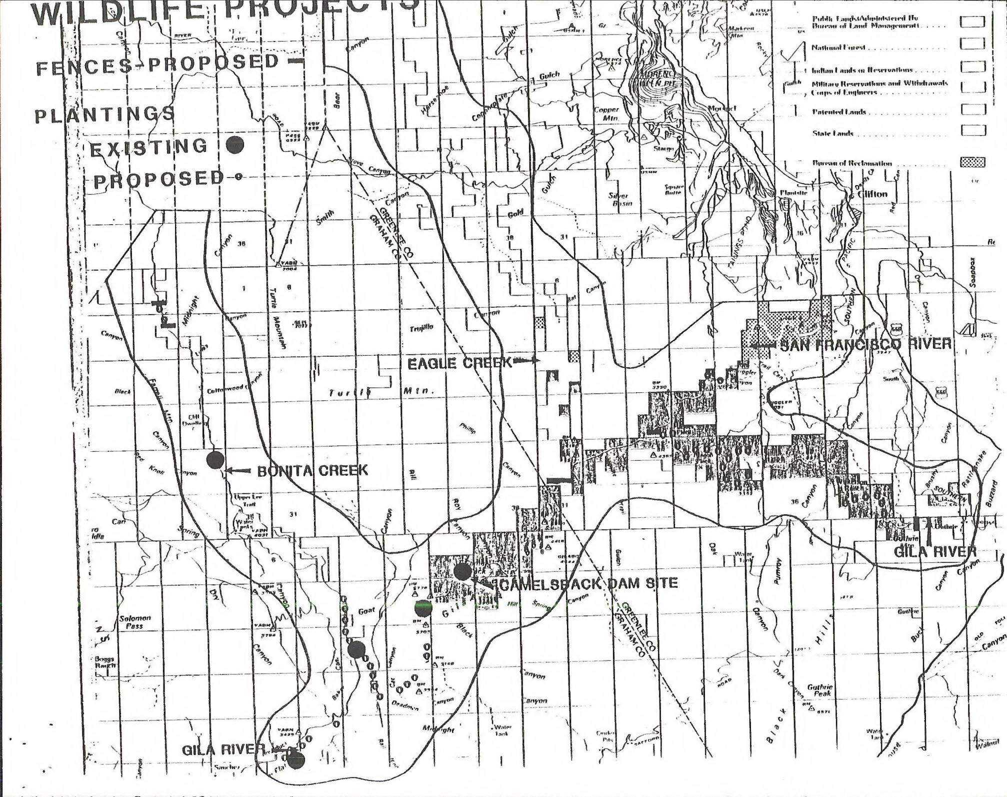
Expansion of the existing Rocky Mountain bighorn sheep population will be monitored by state wildlife personnel. When populations are determined to have been established in new areas, those areas will be investigated by BLM and AGFD personnel for needed habitat improvements and/or the introduction of additional sheep to help stabilize the population.

e. Projects

(1) Gila River

(a) Fencing

The Gila River exclosure fence (See Map E) totaling about 10 miles of fence, will eventually exclude livestock from approximately twenty miles of the river. The beneficial impacts of this fence to the regeneration of broadleaf


WILDLIFE PROJECTS
FENCES-PROPOSED —
PLANTINGS
EXISTING ●
PROPOSED ○
Public Lands Administered By Bureau of Land Management
National Forest
Indian Lands or Reservations
Military Reservations and Withdrawals Corps of Engineers
Patented Lands
State Lands
Bureau of Reclamation
SAN FRANCISCO RIVER
EAGLE CREEK
BONITA CREEK
CAMELSBACK DAM SITE
GILA RIVER
GILA RIVER
GREENLEE CO
GRAHAM CO
Clifton
Morenci
Copper Mtn
Turtle Mtn.
Midnight
Smith
Trujillo
Guthrie
Guthrie Peak
Solomon Pass
Boggs Ranch
Black Hills
Silver Basin
Square Butte
Gold
Goat
Deadman
Sanchez

Map E

riparian habitats is anticipated to be significant. At present, fencing totaling 6 miles in length has been installed and is excluding cattle from about 8 miles of the Gila River. A further 7 miles of fencing is planned to exclude cattle from the rest of the Gila River in the CRMP area.

(b) Plantings

Three sites are currently established along the river and include about fifty cottonwood and willow trees. After the spring planting in 1985, approximately one hundred trees will be established. These projects use a combination of drilling and watering techniques and rely heavily on volunteer labor to make them successful. The potential sites for planting on the Gila River are almost limitless. The limiting factors are time and funding. The combination of planting and exclusion of livestock has the potential to return the Gila River broadleaf riparian communities to their natural dominance along the river.

(2) San Francisco River

(a) Fencing

Fencing was proposed for the San Francisco River in the HMP but no fences have been built to date. Evaluations are continuing as to the extent and location of fences. BLM administers only 5.5 miles of this river in the CRMP area and this limits the options for fencing.

(b) Plantings

One planting site of approximately 25 trees is planned for the San Francisco River for the spring of 1985. Other planting sites are still being identified and evaluated.

(3) Bonita Creek

(a) Fencing

One cattle exclosure is already installed on Bonita Creek and two more are planned. The administrative responsibility for this river, mixed between BLM, the State of Arizona, and private landowners, makes it difficult to cover any extensive reaches of the river. The one existing and two planned cattle exclosures will eventually protect all BLM land in Bonita Creek.

(b) Plantings

Approximately 150 trees will be planted on Bonita Creek in the spring of 1985.

(4) Eagle Creek

BLM has no administrative responsibility for the land along Eagle Creek. As such, no fencing or planting projects are currently proposed. Planting of broadleaf riparian trees may be proposed in the future with the concurrence of the private landowners.

BLM does have partial administrative responsibility for the Eagle Creek Bat Cave. Protection for this maternity colony of Brazilian free-tailed bats (Tadarida brasiliensis) is a high priority. Protection is complicated by private ownership of the mouth of the cave (the interior is on public land) and by administrative responsibility for animal species protection that technically belongs to the AGFD. Despite the complications, a solution to the problem of vandalism (in this ~~case the~~ indiscriminate shooting of bats inside the cave) must be found.

(5) General

A supplemental release of bighorn sheep is planned for the Gila Box. The coordination for this project has been completed and the release is awaiting available sheep. A small population of bighorns has become established in the Eagle Creek area through the wandering of sheep from reintroductions into western New Mexico in 1965 and into the Blue River area of Arizona in 1980.

River otter (Lutra canadensis), a state listed category II species, has also been considered for reintroduction into suitable, historic habitat within the Gila River complex. No evaluations have been undertaken nor proposals made for this species.

AGFD has been releasing 100,000 razorback suckers (Xyrauchen texanus) annually since 1981 to try to reestablish this species in the Gila River complex. These releases will continue until about 1990. The woundfin minnow (Plagopterus argentissimus), a federal endangered and state listed category II species, is also being proposed for release into the Gila River. Additionally, AGFD and Fish and Wildlife Service are evaluating suitable sites for future reintroductions of Gila topminnow (Poeciliopsis occidentalis), a federal endangered and state listed category III species, and the desert pupfish (Cyprinodon macularias), a federal candidate for listing and state listed category I species, in isolated springs and ponds. The loach minnow (Tiaroga cobitis) and spikedace (Meda fulgida), both federal candidates for listing and state listed category III species, will be evaluated for reintroduction in some of the tributary canyons, such as Hot Springs Canyon adjoining Eagle Creek, but not the Gila River.

Monitoring of vegetation by BLM to determine the condition of the broadleaf riparian communities is an ongoing project in the area. Additionally, monitoring of T&E species is planned for 1986. This includes sampling of the fish populations by AGFD and monitoring of nesting raptors by BLM.

Protection of existing mesquite bosques is another planned project. This will involve planting riparian species such as seepwillow and black willow to protect the bosques. The problem with the mesquite bosques is greatly complicated by the absence of middle bank areas on the rivers. In normal situations the bosques are on the upper banks and are buffered by broadleaf riparian trees on the middle banks and by seepwillow, grasses, and other herbaceous vegetation on the lower banks. Protection of the bosques will be included in all planting projects.

There is also a potential for some removal of undesirable species such as saltcedar (Tamarix pentandra). Where saltcedar is established in areas suitable for broadleaf riparian species, some removal may take place. At this time, the planting projects are proceeding slowly with small sites (about two acres). The removal of undesirable species is not currently an issue. If it becomes possible to conduct a major planting effort involving substantially more acreage, the removal of undesirable vegetation may become an issue.

IV. CRMP OBJECTIVES

A. Wildlife Issues

Numerous wildlife related comments were made by various Steering Committee members. It was noted that the Gila Box provides important habitat for a wide variety of wildlife that includes, or has included, several endangered species. These include the bald eagle, peregrine falcon, osprey, razorback sucker, snowy egret, Gila topminnow, woundfin minnow, and desert bighorn sheep. Riparian vegetation and mesquite bosques were identified as major components and often limiting factors with regard to wildlife habitat. Cattle grazing in the canyon bottoms was mentioned as seriously impacting the reproduction of riparian vegetation. Questions were asked about the extent of conflicts between nesting raptors and people.

Objective: Restore and protect broadleaf riparian vegetation to provide habitat for dependent wildlife species, such as black and zone-tailed hawks, and to enhance water quality.
Rationale: This objective would enhance the habitat and populations of dependent wildlife species in the area. Cottonwood, sycamore, willow, and Arizona walnut trees are being planted to expedite the regeneration of riparian vegetation. Riparian habitat has been determined to be the single most important habitat type in terms of density and diversity of native wildlife.

Objective: Protect mesquite bosques in the area.
Rationale: Mesquite bosque habitat is second only to broadleaf riparian habitat in terms of importance to wildlife. Mesquite bosques are currently being impacted by illegal woodcutting on the upper San Francisco River, on the Gila River near Guthrie and below Bonita Creek, and on lower Bonita Creek.

Objective: Work with the Arizona Game and Fish Department (AGFD) and the Fish and Wildlife Service on enhancing and reestablishing viable populations of state or federally listed endangered, threatened, or sensitive wildlife species. Species that may be included are the Gila topminnow, woundfin minnow, river otter, razorback sucker (ongoing), bald eagle, and bighorn sheep.
Rationale: The Endangered Species Act and a Master Cooperative Agreement with AGFD requires BLM to manage lands in such a way as to protect and enhance habitat conditions for listed species.

Objective: Build water sources and fences, as needed, to manage livestock so as to attain total or partial exclusion of cattle from the canyon bottoms. Allow cattle continued access to rivers and creeks until alternate water sources are developed.
Rationale: This objective would protect riparian vegetation and allow it to regenerate in the canyon bottoms.

Objective: Determine the extent of conflicts between nesting raptors (black hawks, zone-tailed hawks, and other species) and people.
Rationale: Acquisition of this data will help determine if controls are needed, where they are needed, and for what time periods they need to be put into effect.

B. Recreation Issues

The other subject that provided many comments was recreation. The Gila Box was acknowledged to be an important recreational use area. Questions were asked about current use levels, whether more use could be accommodated, and access to the area. The natural and visual qualities of the Gila Box were recognized as a key element in making the area attractive for recreation. Off-road vehicle (ORV) use was identified as occurring in the canyon bottoms.

Objective: Provide for continued recreational use of the area.
Rationale: An excellent location for recreation, the study area is becoming increasingly popular for a variety of uses, the most popular of which are ORV use, fishing, and floatboating.

Objective: Provide for continuation of the present type and levels of ORV use in the area, unless studies indicate otherwise.
Rationale: Most of the current ORV use has been ongoing for many years and has had minimal negative impacts on other resources in this area. Minimal impacts occurred due to the type of ORVs involved (i.e. sand rails), the limited number of vehicles using the area, and the times of year the canyons are accessible. Some controls, in the form of regulated seasons of use, restrictions on vehicle type or size, or closed areas, may become necessary to eliminate conflicts with wildlife and other users.

Objective: Determine current use levels and the capacities for future use.
Rationale: Acquisition of visitor use data will help in projecting future use and in determining the amount of management involvement that will be needed.

Objective: Provide adequate access for all recreational users.
Rationale: Private land is presently being used for access by recreationists. Easements or alternate access points need to be established to avoid future conflicts.

Objective: Prevent deterioration of the area's natural and visual qualities (a canyon landscape generally unscarred by man's imprints).
Rationale: The natural and visual qualities that qualify this area for wilderness study and make it attractive for recreation must be retained. Management of this area should prevent deterioration of its unique and undisturbed natural and visual qualities.

C. Range Issues

Livestock use of the area was also commented on. Management and gathering of livestock was acknowledged to be a problem in the canyon bottoms. Range improvements and access roads were identified as important for proper range management. Soil erosion and watershed degradation were noted as having occurred in the area.

Objective: Develop grazing systems to control livestock grazing in the canyon bottoms.
Rationale: This objective will make it easier to manage and gather livestock, improve forage production, reduce soil erosion, aid in the restoration of the overall watershed, and aid in the reestablishment of important vegetative species for wildlife.

Objective: Retain existing road access and maintain existing range improvements.
Rationale: This objective will facilitate proper range management practices and the implementation of grazing systems.

D. Other Issues

The Steering Committee commented on several other subjects. It was mentioned that the cultural resources in the area need to be protected. The two wilderness study areas were identified as an issue whose future has yet to be resolved by Congress. It was noted that single agency land ownership would allow for better management. A comment was also made that existing facilities in the area should not be impaired by future actions.

Objective: Consolidate federal ownership through exchanges for state and private land, or purchase private land from willing sellers. If purchase or exchange is not a viable or desirable option, consider a conservation easement or a memorandum of understanding (MOU).
Rationale: This objective would block up ownership for easier and more effective management. Purchase, exchange, easement, or MOU give a wide variety of options that can be used to ensure better resource management and assure future public use and enjoyment of the area.

Objective: Identify and manage cultural resources to avoid needless destruction.
Rationale: The historic and prehistoric sites preserve an important part of the area's past and should be available for scientific study.

Objective: Manage the Gila Box and Turtle Mountain Wilderness Study Areas to prevent impairment of wilderness values. Congress may either designate them as wilderness or release them from further wilderness study.
Rationale: This objective is based on requirements in BLM's Interim Management Policy and Guidelines for Lands Under Wilderness Review, as required by the Federal Land Policy and Management Act of 1976.

Objective: Manage the resources in the area to the extent they do not impair existing facilities (Phelps Dodge pumping plant, canal facilities, and ranching facilities).
Rationale: The existing facilities are essential to the continuation of ongoing mining, farming, and ranching operations, and as such are important to the economic well being of the residents of Graham and Greenlee Counties.

V. RECOMMENDATIONS

A. Wildlife Issues

Objective: Restore and protect broadleaf riparian vegetation to provide habitat for dependent wildlife species, such as black and zone-tailed hawks, and to enhance water quality.

RECOMMENDATION: Increase the pace of planting riparian trees to about 10 sites per year. Complete the fencing projects where they are feasible and will be effective. Use volunteers whenever possible. Consideration for a special designation and/or withdrawal should be given if the Corps of Engineers (COE) withdrawal application is ever dropped and there is a threat to riparian areas.

Objective: Protect mesquite bosques in the area.

RECOMMENDATION: Include mesquite bosque protection in the major planting effort described for enhancing riparian communities. Protect bosque from firewood cutting by developing an effective strategy, including meaningful management responses, if there are significant losses. Consideration for a special designation and/or withdrawal should be given if the COE's withdrawal application is ever dropped and there is a threat to mesquite bosques.

Objective: Work with the Arizona Game and Fish Department (AGFD) and the U.S. Fish and Wildlife Service on enhancing and reestablishing viable populations of state or federally listed endangered, threatened or sensitive species. Species that may be included are the Gila topminnow, woundfin minnow, river otter, razorback sucker (ongoing), bald eagle, and bighorn sheep.

RECOMMENDATION: BLM has and will continue to cooperate with these agencies. BLM's responsibility in this issue is to ensure suitable habitat for reintroductions, supplemental releases, and experimental populations and to consider the relationship between these and existing or anticipated federal, state or private actions within or adjacent to the release area. Consideration for a special designation and/or withdrawal should be given if the COE's withdrawal application is ever dropped and there is a threat to endangered, threatened, or sensitive species.

Objective: Build water sources and fences, as needed, to manage livestock so as to attain total or partial exclusion of cattle from the canyon bottoms. Allow cattle continued access to rivers or creeks until alternate water sources are developed.

RECOMMENDATION: Build fences where feasible and where they will be effective. Increase funding for this program and include projects in Eagle Creek in cooperation with private landowners. Evaluate the San Francisco River for its inclusion in this program. Increase the pace of this program as time and money permit. Monitor the effectiveness of previous projects.

Objective: Determine the extent of conflicts between nesting raptors (black hawks, zone-tailed hawks, and other species) and people.

RECOMMENDATION: Continue with the present pace of monitoring to note any conflicts. Intensify the monitoring if conflicts become more significant. If needed, initiate a study to determine what conflicts are occurring and what solutions are available to resolve them.

B. Recreation Issues

Objective: Provide for continued recreational use of the area.

RECOMMENDATION: Actively work to resolve problems before they become serious. Allow present uses to continue. Continue to monitor recreational use in the area so as to identify any new problems. As part of the effort to resolve problems, identify the Gila Box as a special recreation management area and conduct recreation planning (the preparation of a recreation area management plan - RAMP). If the need arises, prepare an interpretive brochure for the area and its varied resources.

Objective: Provide for continuation of the present type and levels of ORV use in the area, unless studies indicate otherwise.

RECOMMENDATION: Allow for the continuation of the present type and levels of ORV use with minimal management involvement. Through the RAMP, determine if the present type and levels of ORV use are too low, acceptable, or too high, if the present type of ORV use (sand rails) or other forms (ATVs, 4WD trucks, motorcycles, etc.) are acceptable, and what restrictions might be needed.

Objective: Determine current use levels and the capacities for future use.

RECOMMENDATION: As part of the RAMP, determine the current use levels. Based on the findings, determine how much of an increase in use, if any, can be accommodated.

Objective: Provide adequate access for all recreational users.

RECOMMENDATION: Allow the present situation to continue. As part of the RAMP, determine where problems are occurring and where they may occur. Work with the landowners to resolve the problems.

Objective: Prevent deterioration of the area's natural and visual qualities.

RECOMMENDATION: Retain the natural and visual qualities through the continuation of present management. Retain present visual resource management classes. If needed, use the RAMP for any adjustments or refinements in the visual classes.

C. Range Issues

Objective: Develop grazing systems to control livestock grazing in the canyon bottoms.

RECOMMENDATION: Change allotment management plans only where feasible and accept a small amount of cattle grazing in the canyon bottoms (as during seasonal grazing, irregular grazing years, or at gathering time). Be flexible and use whatever method works best.

Objective: Retain existing road access and maintain existing range improvements.

RECOMMENDATION: Work with private landowners and state, county, and local officials to maintain existing roads. Work with allottees on the maintenance of existing range improvements.

D. Other Issues

Objective: Consolidate federal ownership through exchanges for state and private land, or purchase private land from willing sellers. If purchase or exchange is not a viable or desirable option, consider a conservation easement or a memorandum of understanding (MOU).

RECOMMENDATION: On state lands acquire those parcels in the canyon bottoms by exchange. On private lands acquire those parcels along the rivers if they become available. If they don't become available, work with the owners on easements or MOUs.

Objective: Identify and manage cultural resources to avoid destruction.

RECOMMENDATION: Continue the present form of management. Complete cultural resource inventories on all proposed projects in the area. If the COE's withdrawal application is dropped and if a special designation and/or withdrawal is considered, include enhancing protection of cultural resources in the rationale. Monitor known sites to avoid human and natural resource damage.

Objective: Manage the Gila Box and Turtle Mountain Wilderness Study Areas to prevent impairment of wilderness values. Congress may either designate them as wilderness or release them from further wilderness study.

RECOMMENDATION: Prevent deterioration of the wilderness values by screening proposed projects in the WSAs to determine their overall impacts. Deny any projects that would impair the wilderness values until Congress makes a decision on the areas.

Objective: Manage the resources in the area to the extent they do not impair existing facilities (Phelps Dodge pumping plant, canal facilities, ranching facilities, etc.).

RECOMMENDATION: Deny any proposed projects that would impair existing facilities.

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